DEPARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEERING

VISION

Department of Electronics and Communication will be globally recognized that imparts high quality education and enables innovation, research and teamwork capabilities to students, whose graduates serve diverse needs of society.

MISSION

- To design academic curricula and activities to produce competent Electronics graduates.
- To develop acumen to absorb emerging knowledge and to Life-Long Learning.
- To provide group activities in the area of Electronics and Communication Engineering that enable innovation and teamwork.
- To interact with professional bodies and corporates in Electronics, Communication and IT sectors.

GRADUATES ATTRIBUTES

1. Scholarship of knowledge

Acquire in depth knowledge of specific discipline or professional area, including wider and global perspective, with an ability to discriminate, evaluate, analyse and synthesize existing and new knowledge and integration of the same for enhancement of knowledge.

2. Critical thinking

Analyze complex engineering problems critically; apply independent judgment for synthesizing information to make intellectual and/or creative advances for conducting research in a wider theoretical, practical and policy context.

3. Problem solving

Think laterally and originally, conceptualize and solve engineering problems, evaluate a wide range of potential solutions for those problems and arrive at feasible, optimal solutions after considering public health and safety, cultural, societal and environmental factors in the core areas of expertise.

4. Research skill

Extract information pertinent to unfamiliar problems through literature survey and experiments, apply appropriate research methodologies, techniques and tools, design, conduct experiments, analyze and interpret data, demonstrate higher order skill and view things in a broader perspective, contribute individually/in group to the development of scientific/technological knowledge in one or more domains of engineering.

5. Usage of modern tools

Create, select, learn and apply appropriate techniques, resources, and modern engineering and IT tools, including prediction and modeling to complex engineering activities with an understanding of the limitations.

6. Collaborative and multidisciplinary work

Possess knowledge and understanding of group dynamic, recognize opportunities and contribute positively ton collaborative- multidisciplinary scientific research, demonstrate a capacity a capacity for self-management and teamwork, decision making based on open-

mindedness, objectivity and rational analysis in order to achieve common goals and further the learning of themselves as well as others.

7.Project management and finance

Demonstrate knowledge and understanding of engineering and management principles and apply the same to one's own work, as a member and leader in a team, manage projects efficiently in respective disciplines and multidisciplinary environments after consideration of economical; and financial factors.

8. Communication

Communicate with the engineering community, and with society at large, regarding complex engineering activities confidently and effectively such as, being able to comprehend and write effective reports and design documentation by adhering to appropriate standards, make effective presentations, and give and receive clear instructions.

9.Life – long learning

Recognize the need for, and have the preparation and ability to engage in life – long learning independently, with a high level of enthusiasm and commitment to improve knowledge and competence continuously.

10.Ethical practices and social responsibility

Acquire professional and intellectual integrity, professional code of conduct, ethics of research and scholarship, consideration of the impact of research outcomes on professional practices and an understanding of responsibility to contribute to the community for sustainable development of society.

11.Independent and reflective learning

Observe and examine critically the outcomes of one's actions and make corrective measures and subsequently learn from mistakes without depending on external feedback.

PROGRAM EDUCATIONAL OBJECTIVES (PEOs)

PEO1: In-depth knowledge about Networking and Internet Engineering to analyze, evaluate and design networks

PEO2: Knowledge to carry out research in Networking and Internet Engineering areas

PEO3: Professional ethics, integrity, team work and leadership qualities

PROGRAM SPECIFIC OBJECTIVES (PSOs)

PSO1: Skills to adapt and to offer optimized solutions to new networking and internet related requirements

PSO2: Ability to learn and adapt to different networking tools and techniques

PSO3: Able to secure large network and prevent cyber hacking

PROGRAM OBJECTIVES (POs)

PO1: Independently carry out research/investigation and development work to solve practical problems in the field of Computer Networking and Internet Engineering.

PO2: Write and present a substantial technical report/paper/document related to Networking and Internet Engineering.

PO3: Demonstrate ethics and social responsibilities in the field of Computer Networking and Internet Engineering.

PO4: Adapt themselves to new network discipline and provide necessary solutions.

PO5: Setup and independently manage security issues in Networks.

Scheme for I Year

Sl. No.	Code	Subject	L	T	P	Credits
**I SEMESTER M.Tech NETWORKING AND INTERNET ENGINEERING**						
1	AMT1C01	Advanced Mathematics	4	0	0	4
2	MNI1C01	Probability Statistics and Queuing Theory	4	2	0	5
3	MNI1C02	Network Programming	4	2	0	5
4	MNI1C03	Information and Network Security	3	2	0	4
5	MNI1E1XX	Department Elective-1	3	0	0	3
6	MNI1E2XX	Department Elective-2	3	0	0	3
7	MNI1C04	Research Methodology	2	0	0	2
8	MNI1L01	Information and Network Security and Network Programming Laboratory	0	0	2	1
		Total	**23**	**6**	**2**	**27**
**Total Contact Hrs./Week - 31**						

ELECTIVES OFFERED

**Elective -1**		**Elective-2**	
Sub Code	Sub Name	Sub Code	Sub Name
MNI1E101	Multimedia Communication	MNI1E201	Ethernet Technology
MNI1E102	Wireless Adhoc Network	MNI1E202	Client server programming
MNI1E103	Big data	MNI1E203	Cyber security and Law

Sl. No.	Code	Subject	Hrs/week			Credits
			L	**T**	**P**	
1	MNI2C01	Network Protocol Design	4	2	0	5
2	MNI2C02	Mobile Application Development	4	2	0	5
3	MNI2C03	Protocol Engineering	4	0	0	4
4	MNI2C04	JAVA Technology	3	2	0	4
5	MNI2E3XX	Department Elective-3	3	0	0	3
6	MNI2E4XX	Department Elective-4	3	0	0	3
7	MNI2IXX	Industry Driven Elective	2	0	0	2
8	MNI2L01	Java and Mobile applications Lab	0	0	2	1
		Total	**23**	**6**	**2**	**27**
		Total Contact Hrs./Week - 31				

II SEMESTER M.Tech
NETWORKING AND INTERNET ENGINEERING

ELECTIVES OFFERED

Elective -3		Elective-4	
Sub Code	**Sub Name**	**Sub Code**	**Sub Name**
MNI2E301	Semantic Web and Social Networks	MNI2E401	Internet of Things- (IoT)
MNI2E302	Bioinformatics	MNI2E402	Storage Area Network
MNI2E303	Web Services	MNI2E403	Network Management
Industry Driven Elective			
MNI2I01	IDE (Industry Driven Elective)	-	-

Scheme for II Year

Sl. No.	Subject Code	Subject	L	T	P	Credits
III SEMESTER M.Tech **NETWORKING AND INTERNET ENGINEERING**							
1	MNI3OXX	Open Elective	3	0	0	3
2	MNI3C01	Engineering Management	3	0	0	3
3	MNI3C02	Seminar/Paper Presentation	0	0	0	1
4	MNI3C03	Internship	0	0	0	5
5	MNI3C04	Project Phase-I	0	0	0	7
		Total	**6**	**-**	**-**	**19**
Total Contact Hrs./Week - 6							

Open Elective	
Subject Code	**Title**
MNI3O01	Internet of Things (IoT)
MNI3O02	Multicore Architecture and Programming

Scheme for II Year

Sl. No.	Subject Code	Subject	Category	L	T	P	Credits
IV SEMESTER M.Tech **NETWORKING AND INTERNET ENGINEERING**								
1	MNI4C01	Project Phase-2	Project	0	0	0	15
		Total		**-**	**-**	**-**	**15**